CRIMSON PIPELINE L.P.

DOMINGUEZ CHANNEL OIL SPILL

PROJECT PLAN FOR INVESTIGATION REMOVAL, MITIGATION OR PREVENTION OF A SUBSTANTIAL THREAT OF OIL DISCHARGE

May 3, 2011

THE DOMINGUEZ CHANNEL OIL SPILL
PROJECT PLAN FOR INVESTIGATION REMOVAL, MITIGATION OR PREVENTION OF A SUBSTANTIAL THREAT OF OIL DISCHARGE

WAS PREPARED BY THE FOLLOWING COMPANIES

CRIMSON PIPELINE L.P.,
BEACON ENERGY SERVICES INC.,
WGR SOUTHWEST INC.,
AND
STANTEC CONSULTING CORP.

CRIMSON PIPELINE L.P.
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1.0 INTRODUCTION

This Project Plan for Investigation, Removal, Mitigation or Prevention of a Substantial Threat of Oil Discharge ("Project Plan"), dated May 3, 2011 is submitted by Crimson Pipeline, L.P. (Crimson)[1] to the U.S. Environmental Protection (EPA) Agency, Region IX in compliance with Paragraph 14 of the Order for Removal, Mitigation or Prevention of a Substantial Threat of Oil Discharge No. OPA CWA 311-09-2011-0002, dated March 30, 2011 (Order).[2] Crimson submitted a Work Plan on April 13, 2011. This Project Plan incorporates EPA's comments on the April 13 Work Plan.

On December 21, 2010, the National Response Center (NRC) received an incident notification of an oil sheen coming from the Dominguez Channel near Wilmington, CA. Dominguez Channel is an intertidal drainage system in southern Los Angeles County that empties into the East Basin of the Port of Los Angeles and the Pacific Ocean. It was observed that the oil entered the channel from the outfall of a City of Los Angeles storm water lift station. Oil entered the storm water system from an outfall of the Alameda Corridor Transportation Agency (ACTA) Right-of Way (ROW) storm water drainage system (french drain). Oil was also observed migrating from the ACTA railroad ROW onto the Shell Lubricants facility, approximately 0.45 miles to the north. Oil from this expression migrated with storm water into the Shell Lubricants facility storm water retention basin. The flow of oil from the apparent source area is intermittent and related to rain events that cause flow in the storm water systems (ACTA, January 2011).

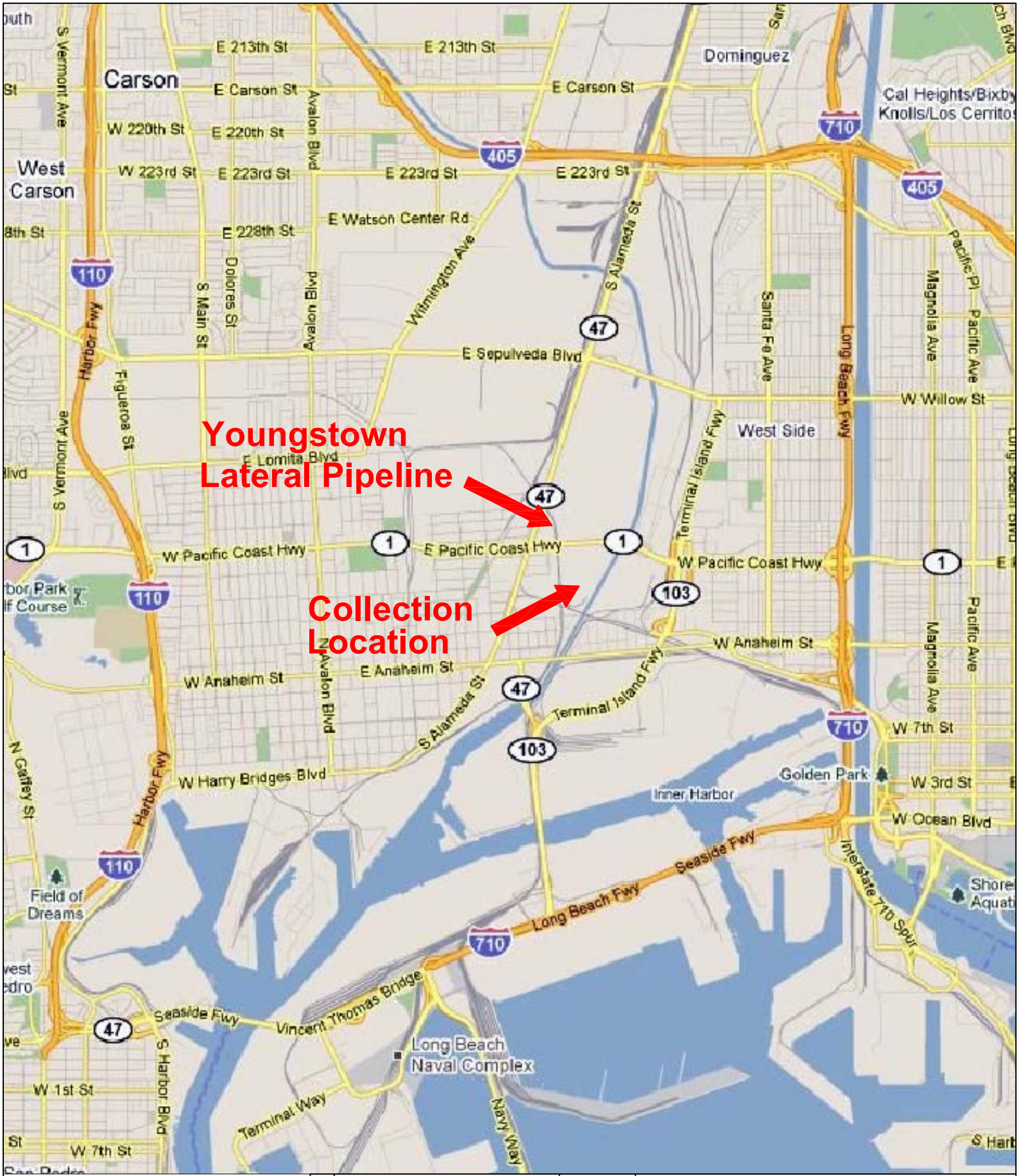
The "Youngstown Lateral" is a 4-in pipeline, which runs within a 12-in casing and, crosses the ATCA railroad ROW in the vicinity of the Tesoro Refinery and the Dominguez Channel near Wilmington, California (Figure 1). On March 29, 2011, an excavation by ACTA of a portion of the

french drain above the Youngstown Lateral revealed damage to the 12-in casing around the Youngstown Lateral.

The area of the suspected release is surrounded by crude oil production, storage and refining facilities. This Project Plan is intended to address only the effects of discharges of crude oil into the

[1] The Order was issued to Crimson Pipeline Management, Inc., which is referred to as "Crimson Pipeline Management Company" in the Order. The Youngstown Lateral Pipeline is owned and operated by Crimson California Pipeline, L.P. Crimson Pipeline, L.P. is the general partner of Crimson California Pipeline, L.P. Crimson Pipeline Management, Inc. is the general partner of Crimson Pipeline, L.P.

[2] This Project Plan is not intended as an admission by Crimson or its affiliates that all or any specific quantity of the crude oil in the ACTA french drain was discharged from the Youngstown Lateral pipeline. Crimson and its affiliates maintain that any release of crude oil from the Youngstown Lateral was the sole result of actions of third parties. This Project Plan is submitted without prejudice to Crimson's or its affiliates' right to recover costs expended pursuant to the Order from ACTA, other third parties or the United States. By submitting this Project Plan, Crimson and its affiliates do not intend to admit that the Order was properly issued or that they are responsible parties under section 311 of the Clean Water Act (33 U.S.C. § 1321) or the Oil Pollution Act (33 U.S.C. § 2701, *et seq.*). Crimson and its affiliates hereby reserve all statutory and common law rights, claims and defenses against the third parties and the United States, including rights, claims and defenses under section 311 of the Clean Water Act and the Oil Pollution Act.



North

Scale: 1" = 0.75 miles

#	Revision Description	Date

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Figure No.: Figure 1 - Vicinity Map

ACTA french drain. It is anticipated other hydrocarbon contamination may exist within the subsurface of the project boundaries due to other historical events and activities; this plan is not intended to address other subsurface conditions unrelated to this event.

1.1 PURPOSE AND OBJECTIVE

The purpose and objective of this Project Plan is to describe the procedures, protocols and activities that will be performed in response to the Order. Detailed Work Activity Plans will be submitted for the specific activities described in this Project Plan.

1.2 SCOPE OF WORK

This Project Plan is intended to address the requirements of the Order in accordance with the National Contingency Plan (40 CFR 300). Specifically, Paragraph 14 of the Order requires Crimson to prepare the Project Plan to provide a concise description of the activities to be conducted to comply with the Order (Appendix A). These requirements are outlined below.

a. The study, design and implementation of immediate measures to halt the discharge of oil into the environment. This study must include the entire area of the Site, including all areas from the location of the release up to and including Dominguez Channel.

b. The study, design and implementation of measures to clean up and remove all oil and petroleum contamination at all impacted areas of the Site. Each of the areas are identified below along with a reference to the section of this Project Plan where detailed information can be found.

    i. The location of the spill origin (Section 3.1.1 and 3.1.2);
    ii. The migration pathway into the railroad right of way (Section 3.1.3);
    iii. Contaminated soil (Sections of 3.2);
    iv. Sediment and ballast on the railroad right of way (Section 3.2.3);
    v. The railroad subsurface drainage system (Section 3.2.3);
    vi. The impacted parking lot area at the Shell Refinery Lube Plant (Shell Lube Plant, Section 3.2.4);
    vii. The surface and subsurface drainage system at the Shell Lube Plant (Section 3.2.5);
    viii. The storm water management pond for the Shell Lube Plant (Section 3.2.6)
    ix. Any discharge points from the Shell Lube Plant to the Dominguez Channel (Section 3.2.7);

c. The proper identification of and means of disposal for waste generated during the response to this incident, with a means to determine the quantity of petroleum in each waste stream. Quantification methods will be pursuant to the California Department of Fish and Game's (DFG) methods, and consistent with its methodology for oil spill

quantification. Crimsons has followed EPA's direction and incorporated by reference, the DFG waste segregation and oil quantification plan for this project.

d. A Sampling and Analysis Plan (SAP) that includes all sampling and analysis to be performed pursuant to this paragraph. The SAP includes a quality assurance/quality control, data validation, and chain-of-custody procedures regarding all sampling and analyses performed pursuant to this order. Crimson has developed a SAP for this project which is included in Appendix B of this Project Plan.

e. Schedules for implementing and completing all tasks described within the Project Plan. Crimson has included a conceptual schedule in Appendix C. This schedule will be revised as Work Activity Plans are developed and access to the railroad ROW is confirmed.

f. A Health and Safety Plan (HASP) prepared in general accordance with the applicable HAZWOPER standards for this Site. Crimson has developed a template HASP (Appendix D) which will be completed for each work site / work activity. The HASP also identifies the site Health and Safety Officer's role and responsibilities in approving HASP's and his / her responsibilities in managing safety for all work associated with this project.

This Project Plan is intended to address the six (6) items listed above with a goal of working cooperatively with the EPA, other Respondents, and agencies to develop and achieve prevention of any future oil release, investigation, and mitigation of suspected releases.

This Project Plan is intended to provide an action plan for completing oil removal and mitigation activities for the restoration of affected areas of the Site. Although substantial investigation and response work has been completed, investigations and response efforts are still underway at the writing of this Project Plan. Therefore, certain actions described herein may have been implemented or completed at the time of this submittal. Addenda to the Project Plan will be submitted as conditions change or are revealed during subsequent investigation and removal actions as indicated on the project schedule in Appendix C.

This Project Plan, once approved, will be made part of the Order for Removal, Mitigation or Prevention of a Substantial Threat of Oil Discharge.

1.3 PROJECT ORGANIZATION

Key Personnel

Title/Responsibility	Contractor	Name	Phone Numbers	
			Office	*Cell*
EPA Project Manager (OSC)		Jason Musante	--	213-479-2120
California Department of Fish (CDFG) & Game (OSPR) Lieutenant		Bryan Gollhofer	562- 342-7214	562-708-7757
CDFG OSPR Biologist		Cory Kong	562- 342-7214	562-477-7081
CDFG OSPR		James Foto	562- 342-7214	562-598-4292
Crimson Pipeline VP (Project Coordinator)	Crimson Pipeline L.P.	Larry Alexander	562-595-9216	949-922-9895
Project Consultant	Beacon Energy Services Inc.	Mark Reese P.G.	562-997-3087	714-624-5301
Waste Management Supervisor	WGR Southwest Inc.	Bill Senner	562-799-8510	310-629-5260
Removal Coordinator	WGR Southwest Inc.	Graydon Martz P.G.	562-799-8510	310-629-5261
Project Engineer	Stantec Consulting Corp.	Kevin K. Miskin P.E.	909-335-6116	909-224-3406
Investigation Coordinator	Stantec Consulting Corp.	Jim DeWoody	909-335-6116	619-459-2089
Quality Assurance (QA) Officer	Stantec Consulting Corp.	Jim Kerr P.G.	970-879-3250	303-807-4702
Laboratory QA Officer	Test America Laboratory	Lena Davidkova	949-261-1022	--
Environmental Compliance, GIS Drafter	Beacon Energy Services Inc.	Valerie Muller	562-997-3087	310-809-3918

2.0 RESPONSE ACTION

2.1 SITE DESCRIPTION

The Site encompasses the area bounded by the Youngstown Lateral pipeline location (Figure 2) on the northern end and continuing southward for approximately 3000 feet to the "Collection Area" near the vicinity of Leeds Avenue and Grant Street in Wilmington, California (Figure 3). The east - west boundaries of the site plan are defined as the ACTA railroad ROW. While these boundaries are used to geographically describe the Site, Crimson recognizes that the boundaries may change based on actual field conditions discovered during the project investigation.

The Site is divided into several more defined Area of Concerns (AOC) as listed below;

- **Youngstown Lateral – AOC #1** Incorporated in this AOC is the area surrounding the Youngstown Lateral pipeline and damaged casing approximately 900 feet north of the PCH, east of the Tesoro Refinery and the Spur Track to the west (Figure 1).

- **French Drain –AOC #2** This AOC includes the area surrounding both french drains systems that run parallel to the ACTA railroad ROW. AOC #2 includes the area from the Youngstown Lateral south to the City of Los Angeles' storm drain system on Leeds Avenue just north of the intersection with Opp Street.

- **Shell Lube Plant – AOC #3** This AOC incorporates the eastern edge of the Shell Lube Plant from the Catch Basin area located in the northeast corner of the property to the southeast corner as presented in Figure 2.

- **Storm Drain Collection-AOC #4** The storm drain collection area is located south of the 18-in outfall from the french drain system near the intersection of Leeds Avenue and Grant Street and continues south to covers any areas of investigation to the Dominguez Channel.

- **Dominguez Channel-AOC #5** This AOC includes the sidewall, banks, and surface water of the Dominquez Channel adjacent to the Shell Storm water retention pond to where the channel empties into the East Basin of the Port of Los Angeles. This Area has been determined to be completed and is no longer a concern per the EPA.

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North

Scale: 1" = 250'

#	Revision Description	Date
1	Change Figure Number	4/25/2011

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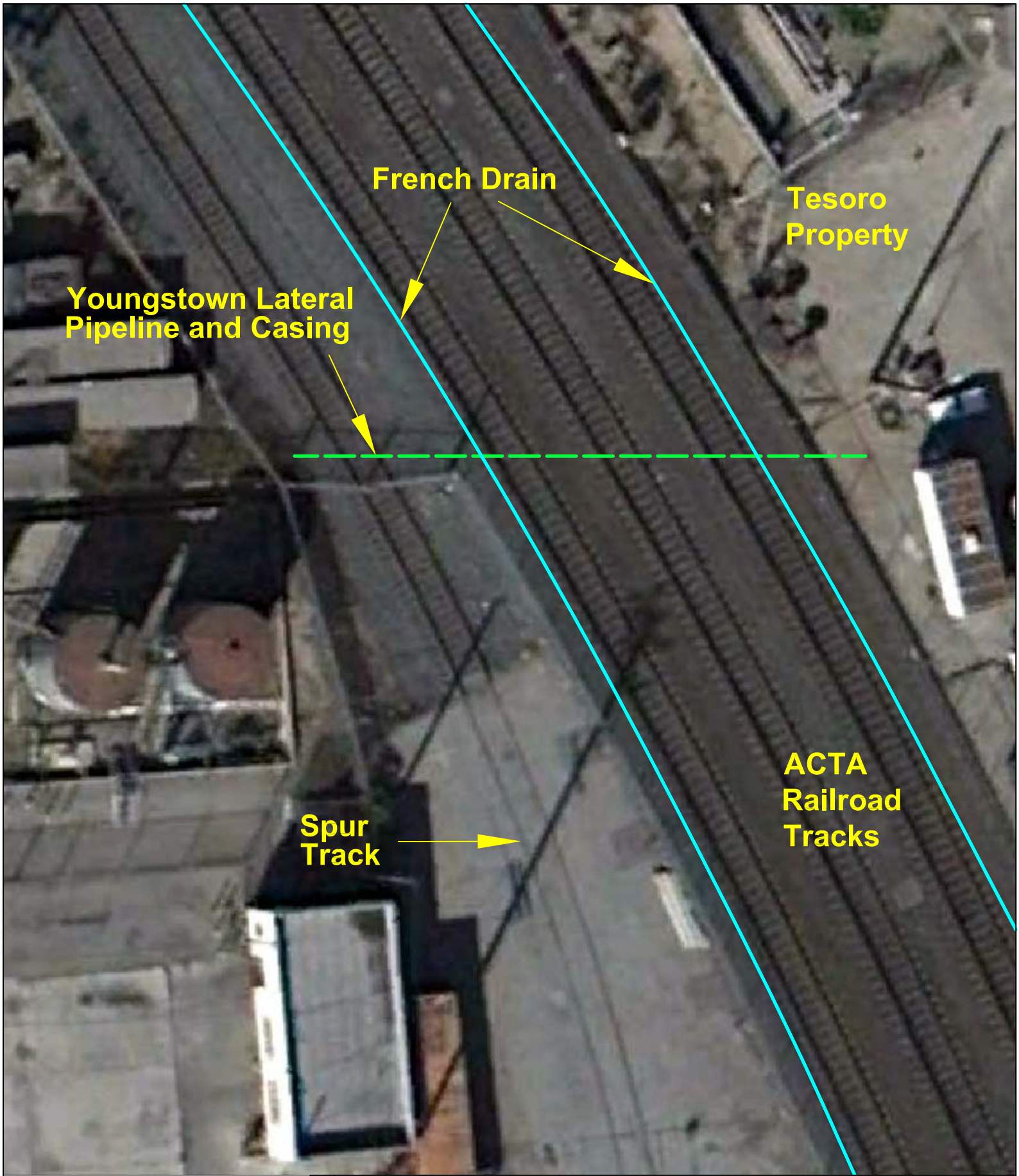
Figure No.: Figure 2 - Site Map - Shell Plant & Collection Area



North

Scale: 1" = 20'

#	Revision Description	Date
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Figure No.: Figure 3 - Site Map - Source Area

2.2 PREVIOUS EMERGENCY RESPONSE ACTIONS TO DATE

The following summary of emergency response actions and investigations performed by ACTA and EPA is based on information provided in ACTA's Work Plans and recent discussions with ACTA personnel. The details of the emergency response actions will be confirmed with ACTA and presented in the final report.

2.2.1 Modifications to Shell Source Area

Approximately 900-ft south of Pacific Coast Highway (PCH), oily water overflowed a concrete barrier on the west side of the ACTA ROW, and flowed onto the Shell Lube Plant. At this location (referred to as the Shell Source Area) ACTA and NRC, increased the height of the west wall using sandbags, enlarged and improved the collection of the oily/water in the excavated sump area. Detail of the emergency response actions are included below.

In December 2010, the EPA and their contractor, EQM, installed two catch basins to contain the oily water flowing from the ACTA Right of Way and excavated a sump (approximately 2-ft by 2-ft and 2-ft deep) in the ballast north of these basins.

ACTA improved the Catch Basin Area by extending the existing sandbags further along the western fence line. Additional sandbags were placed on top of the existing sandbags; increasing the height to approximately 4-ft. Plastic sheeting was then installed on the east side of the sandbags to decrease permeability. The plastic sheeting was anchored at the bottom by removing soil/ballast in an about 12-in wide and 4-in in depth of for the full length of the wall. The plastic sheeting was placed in this excavated area and additional row of sandbags were placed on top. The plastic sheeting was anchored at the top with an additional row of sandbags.

ACTA's subcontractors improved the sump area by installing 15-in diameter perforated PVC pipes (wells), ranging from about 4-ft to 8-ft in length in this area. Approximately 2-ft of the PVC well was installed above grade and between 2-ft to 6-ft was installed below grade. The shorter length of pipe was placed near buried utilities such as the Shell 18-in diameter corrugated steel pipe (CSP) storm drain and 12-in oil pipeline (identified as ARCO). Underground Service Alert (USA) was contacted 48-hrs prior to any excavation. The wells were installed to assess below grade conditions adjacent to the 8-in diameter railroad underdrain pipe. The deeper wells were installed by an 18-in diameter auger, placing the pipe in the center and backfilling with angular ballast. The shallower wells were installed by hand excavating these areas, placing the pipe in the center and backfilling with ballast. Soils removed from this area were placed in Department of Transportation (DOT) approved 55-gal drums for eventual sampling and disposal. Periodically the oil on the water surface will be manually removed with a vacuum truck during the dry season and oil and water will be removed with a vacuum truck during a rain event as needed. ACTA and Crimson is researching the possibility of installing a passive hydrocarbon skimmer system inside these wells (ACTA, January 2011).

2.2.2 Video Taping 8-in Track French Drain System in the Texaco Slot Area

In the first and second week of January, National Plant Services (an EPA contractor) inspected a portion of the 8-in french drain system starting at the manholes located about 120-ft south of PCH and proceeding north in both the west and east side track drains. The inspection was performed by inserting a remote controlled robotic crawler camera into the drains and viewing the results on a monitor. The inspection was videotaped for future reference. The inspection of the west drain concluded at the cleanout located at Station 978+70 due to a blockage (Figure 4) and in the east drain at Station 976+40 due to the loss of traction by the robotic crawler. The blockage on the west side drain appears to have been caused by ballast entering through a damaged cleanout into the track drain. The loss of traction on the east side drain was caused by a thick layer of oil in the bottom of the french drain system. ACTA proposed to continue the inspection of the french drain system starting at the same manholes located about 120-ft south of PCH (Station 983+30) and working south. National Plant Services was contracted to perform these activities. Additional inspections were performed at the following locations:

Section A = West side proceeding north and south, between manholes at Station 983+30 and Station 999+00.

Section B = East side proceeding north and south, between manholes at Station 983+30 and Station 999+00.

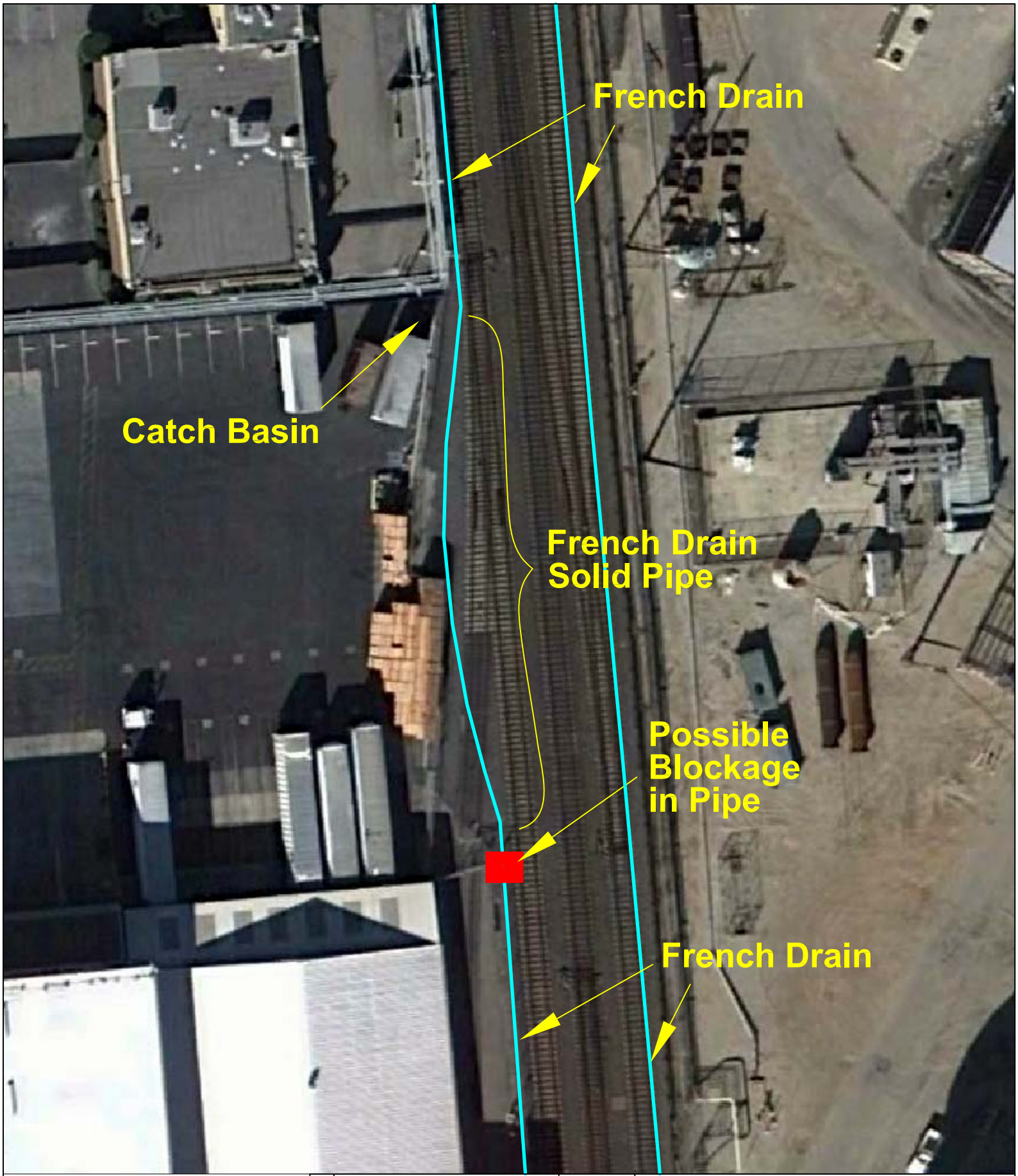
Section C = West side proceeding north and south, between manholes at Station 999+00 and Station 1002+25,

Section D = West side proceeding north and south, between manholes at Station 1002+25 and Station 1002+60,

Section E = Proceed east and west, between manholes at Station 1002+60 (west side) and Station 1002+80 (east side),

Section F = East side proceeding north and south, between manhole at Station 999+00 and where the track storm drain system tees into Segment E.

At the conclusion of the inspection activities, a report will be completed along with a copy of the videotape generated during the inspection activities and provided to the EPA. This report will document the location of any blockages, the presence of oil, and other significant findings (ACTA, February 2011).



North

Scale: 1" = 40'

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Figure No.: Figure 4 - Site Map - Track Area

2.2.3 Removal of Oil from City of Los Angeles Leeds Avenue Storm Drain System and Lift Station

The impacted storm water entered the City of Los Angeles' storm drain system on Leeds Avenue just north of the intersection with Opp Street and traveled south into the City's sump lift station located on I Street (Figure 5). The impacted storm water was pumped through the City's sump lift station and was discharged into the Dominguez Channel south of the intersection of Leeds Ave and Southerland Ave.

ACTA assumed maintenance and operation (M&O) of Sump Lift Station No. 692 on January 21, 2011. The M&O activities included the drawdown of nuisance water that continually enters the pump station, the removal of any oily sheen on top of the water in the wet well, placement and maintenance of the boom in the Dominguez Channel, and coordination with the City of Los Angeles or their contractor during rain events.

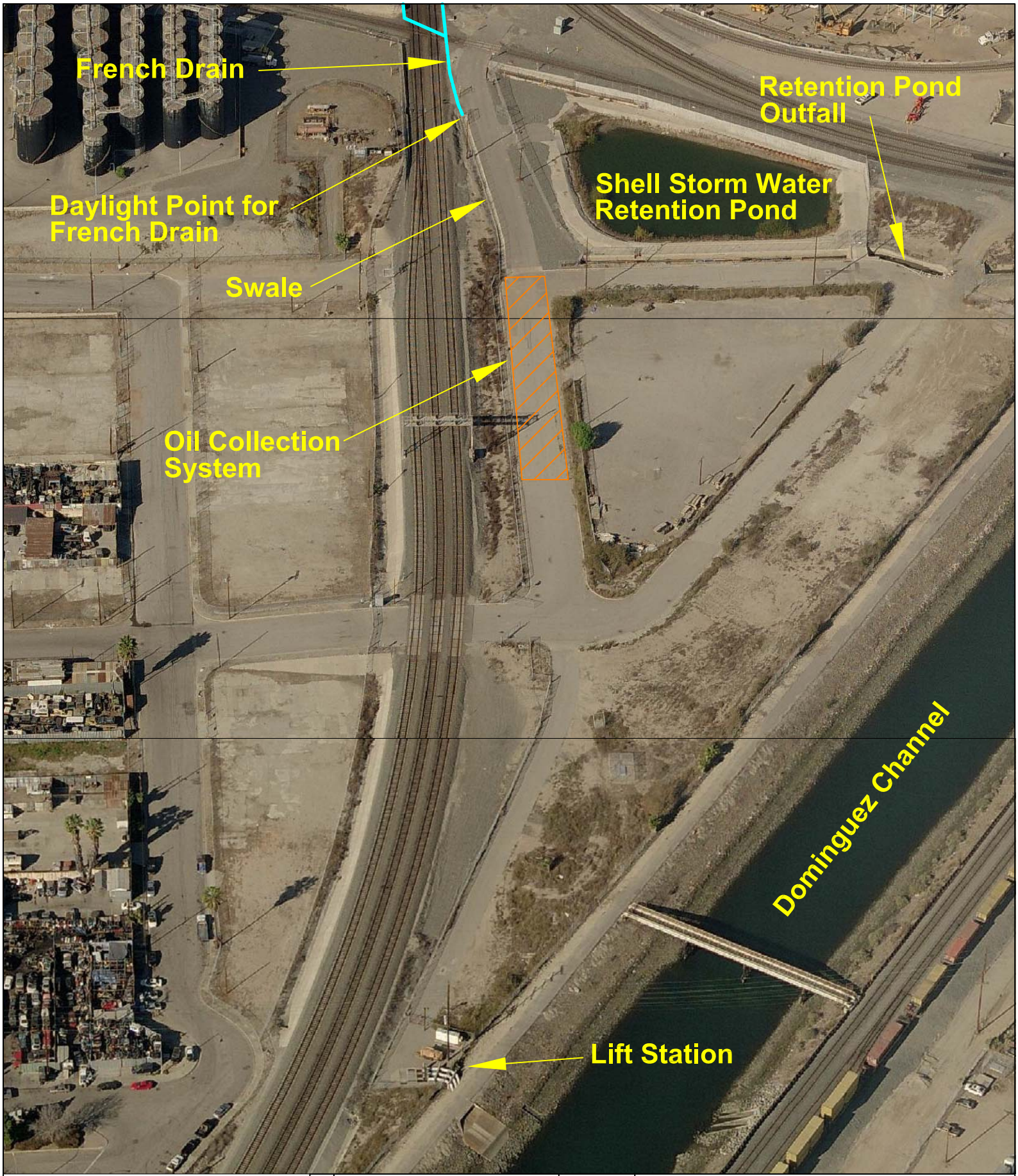
As part of the emergency response plan for the sump lift station wet well and the storm drain system, ACTA mobilized personnel and equipment to the Site. ACTA personnel delineated and established safe working areas around the storm drain catch basins and manholes along Leeds Avenue to clean the storm drain Inlets and pipeline to remove oily water from the sump lift station including water from connector laterals near the Site. Confined space entries was utilized to clean the interior of the storm drain lines by pressure washing the interior drains leading from the Leeds Avenue catch basins to the sump lift station wet well. The sump lift station, wet wells, connector laterals and storm water drain lines were cleaned until the cleaning waters produced no oil sheen.

Sorbent material was utilized to collect free oil during the cleaning operations and removed at the completion of the cleaning operation. During cleaning operations, a vacuum truck or pump system was used to pump out impacted oily water. Approximately 100,000 gallons of impacted oily water was transferred into 21,000-gallon Baker tanks staged on-site.

At the completion of the work activity, the interior of the Baker tanks will be washed clean and the waste water disposed of in a similar manner (ACTA, February 2011).

2.2.4 Collection and Treatment of Storm Water

Fugitive oily product entered the railroad french drain system within the ACTA ROW in the area north of PCH and then migrated south until the oily waste was discharged into Leeds Avenue near the intersection with Grant Street. The oily runoff flowed south and then entered the City of Los Angeles' storm drain system on Leeds Avenue just north of the intersection with Opp Street. The oily waste traveled south from the intersection into the City's sump lift station located on I Street. The City's sump lift station then discharged the oily water into the Dominguez Channel.



North

Scale: 1" = 100'

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Figure No.: Figure 5 - Site Map - Outfall Area

As part of the emergency response action EPA installed a storm water collection and treatment system at the location near the intersection of Leeds Avenue and Grant Street drains to the asphalt surface. The collection and treatment system was located south of the 18-in outfall from the french drain system. The collection and treatment system was designed as a "polishing area" prior to discharging storm water into Leeds Avenue curb and system.

During the emergency response action ACTA mobilized personnel and equipment to intersections of Leeds Ave. and Grant Street to install a larger collection and treatment system. The area of the collection and treatment was spray painted prior to placement of materials.

ACTA improved and enlarged the existing collection and treatment system by placing Temporary Railings (Type K), also known as K-Rails, along the east and west curb (in the gutter) of Leeds Avenue, and across both ends. A V-ditch was used to transport the storm water from the southern end of the 18-in corrugated steel pipe (CSP) at the northwest corner of Leeds Avenue and Grant Street to the collection and treatment system.

After placement of the K-Rails, the area was lined with 10-mil plastic sheeting, including covering the sidewalls of the K-Rails. The plastic sheeting (rolls of 20-ft by 100-ft) was overlapped by approximately 2-ft with the southern section placed under the northern section. Sandbags were placed along the overlapped area to create a seal. Sandbags were also used to anchor the plastic along the bottom of the K-Rails on the inside and outside of the collection and treatment area.

Three weir areas were constructed in the same manner equal distant along the length of the detention area except the plastic sheeting extends up and over each row of K-Rails. Sandbags were placed at the east and west ends of the K-Rails where the weirs were installed.

The weir system contains PVC pipes with valves which will allow the movement of water between each weir area. As the flow of water fills up each weir area, the water will slow down allowing the oil to float to the top where it can be removed with pads and booms prior to being released into the next downstream weir area.

ACTA estimated the volume of the water in the collection and treatment system as approximately 170,000-gals assuming an average depth of 2-ft. Treated water will be discharged to the City of Los Angeles storm drain (ACTA, February 2011).

Crimson intends to take over operation of the containment and collection facilities and ongoing response activities at the Shell Lube Plant and at the Collection Area as described above. The takeover by Crimson will occur as soon as Crimson enters into access agreements with the property owners of those facilities. Crimson will coordinate the transition with ACTA and their contactors.

3.0 PROJECT PLAN

3.1 STUDY, DESIGN, AND IMPLEMENTATION TO HALT DISCHARGE OF OIL

This section of the Project Plan is divided into segments to more precisely describe the additional studies and investigations that will be conducted as part of the prevention and investigation of oil discharge. Subject to obtaining access agreements and cooperation of numerous businesses and property owners, Crimson intends to assess and investigate these areas and to implement any required mitigation measures by September 2011.

Crimson will prepare specific work plans for approval by EPA. These plans will describe activities to be undertaken to investigate and mitigate possible sources of oil from areas which may contain free oil. Each Work Activity Plan will have a schedule of activities to be performed and a timeline for completing the work.

3.1.1 Source Control

It is suspected that oil was released from the Youngstown Lateral pipeline casing as the result of a leak in the pipeline and damage to the casing that is described below (Figure 3). The pipeline was shutdown on October 18, 2010 after a small quantity of oil (approximately two gallons) was discovered to have leaked from a casing vent on the east side of the pipeline location. Crimson isolated the Youngstown Lateral pipeline from the THUMS 8-in pipeline by closing the valve at the connection. Crimson then pressurized the Youngstown Lateral pipeline to evaluate the integrity. The line failed to hold pressure. Crimson then flushed all of the oil from the pipeline using water, displacing the oil into a vacuum truck. Crimson then isolated the pipeline from the Youngstown Lease and the THUMS 8-in pipeline by closing all of the associated valves.

Crimson then used the casing vents to attempt to flush any oil from the casing. Water was placed into the casing on the west side and recovered through the casing vent on the east side using a vacuum truck. Approximately 50 barrels of water were introduced into the casing and approximately 50 barrels of oily water were recovered from the casing. Based on the actions taken by Crimson, it is believed that any potential on-going source from the Youngstown Lateral pipeline has been eliminated.

The pipeline casing is intended to contain any oil leaking from the pipeline. The pipeline had been pressure tested in 2007 at 450 psi, well above its operating pressure and had passed that test. The appearance of oil in the vent was consistent with a leak in the pipeline. The fact that a small quantity of oil had escaped from the vent indicated that the casing was intact and that a small leak had developed sometime after the test date. Crimson had no records or other information indicating that the casing had been damaged or had not contained the oil that had leaked from the pipeline.

3.1.2 Source Investigation

In March 2011, Crimson and ACTA conducted investigations of both the east and west ends of the pipeline casing. These investigations confirmed that the casing seals were intact and no oil had been released from the ends of the casing at these locations. The damaged casing was first observed when ACTA removed a section of french drain over the casing on March 29th, 2011 (Figure 6). A visual inspection of the french drain where it crosses the casing along the west side of the west rail revealed that the casing had been damaged resulting in a hole in the casing and an apparent complete circumferential crack of a butt weld at the location of the hole. The damage appears to have occurred during the construction of the french drain. Because the damage was beneath the french drain and related structures, the damage could not be detected until those structures were removed by ACTA. Crimson was unaware of the damage to the casing prior to March 29th, 2011 and had no reason to suspect that such damage had occurred. Crimson believes that any oil that may have been released from the pipeline and into the casing, exited the casing and entered the railroad french drain at this location. Upon inspection, only minor amounts of oil and water were present in the subsurface at this location. This further confirmed that the pipeline was not an active contributing source to the release.

3.1.3 Source Investigation and Migration Pathway onto ROW

Crimson has developed a preliminary plan to remove the pipeline from the casing and to remove portions of the casing along the west side of the west rail as described in Section 3.1.4. The selection of a final plan is contingent upon obtaining access agreements from various property owners.

Once the pipeline and the damaged portion of the casing have been removed, Crimson will conduct a subsurface investigation in the area to assess both the vertical and lateral extent of any related crude oil contamination associated with a release from the pipeline. Additional details of this investigation will be described in a separate Work Activity Plans currently under development and will be submitted to EPA for approval prior to commencement of work.

3.1.4 Pipeline and Casing Removal Plan

3.1.4.1 Removal of 4-inch pipeline inside Crimson Casing

Crimson has developed the following work activities for the proposed removal of the 4-in pipeline from inside of the casing. The portion of the pipeline to be removed is approximately 85-ft long and will be removed in sections of undetermined length dependent upon access provided from the adjacent property owners. Figures 3 is a drawing of the proposed locations and facilities necessary to remove the pipeline. Crimson will perform the following activities associated with the pipeline removal:

Youngstown Lateral casing beneath french drain on west side of ACTA rail system. French drain and fill material have been removed to expose the casing.

#	Revision Description	Date
1	Change Figure Number	4/25/2011

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Dominguez Spill

Figure No.: Figure 6 - Youngstown Lateral - Damaged Casing

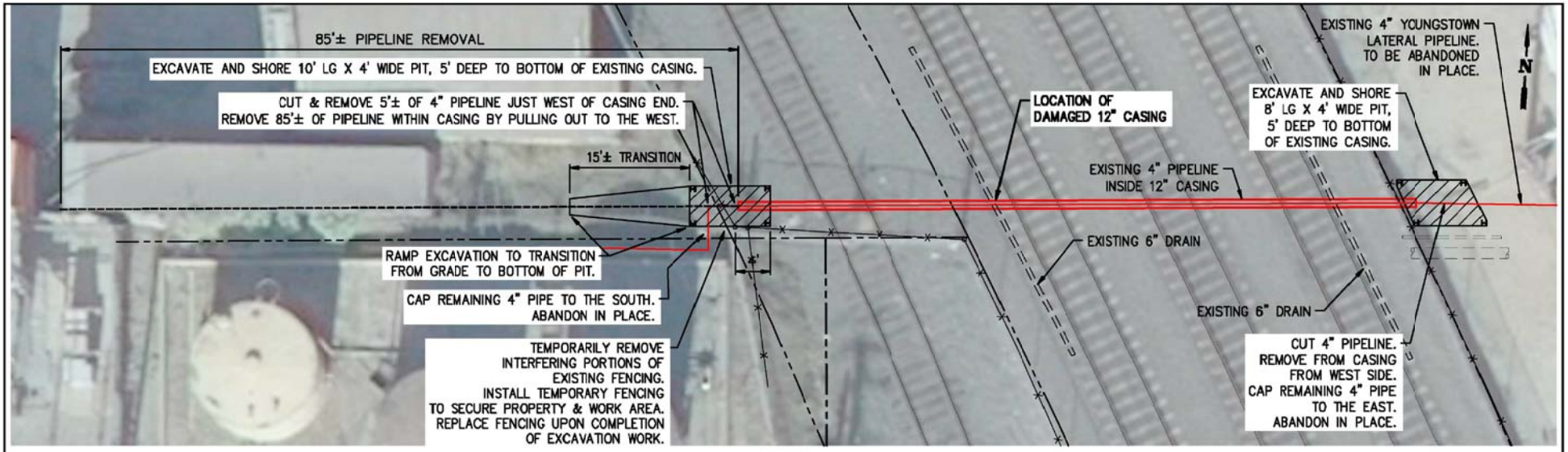
1. Appropriate shoring will be designed / engineered to allow excavation of both the east and west ends of the Crimson casing (Figure 7 and 8).
2. Access to the westerly excavation will require an Access Agreement with one of two adjacent landowners - Tarrico, or Louis J. Grognale Trust (Louie Trust).
3. Access to the easterly excavation will require entry through the Tesoro refinery and the submission and approval of appropriate Tesoro work permits.
4. Preferred access to the westerly excavation will be on the property owned by the Louie Trust. If an Access Agreement with Louie Trust is secured, the 4-in pipe removal will be conducted as follows:

    a. Crimson contractors will excavate and install the shoring required to safely remove the pipeline;
    b. After exposure on both east and west ends, the 4-in pipeline will be cut on both ends;
    c. The pipeline will be marked on each end for orientation to the pre-cut vertical position of the pipeline;
    d. The 4-in pipeline will be pulled from the west end in one complete section onto property owned by the Louie Trust; and
    e. The cut ends of the pipeline will be capped and welded closed.

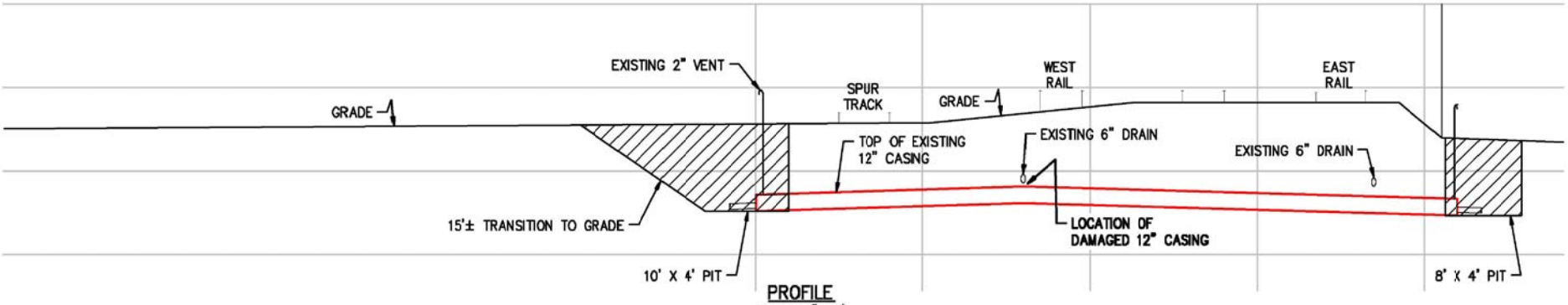
5. If access onto the Louie Trust property cannot be secured, the 4-in pipe removal will be conducted as follows:
    f. Excavation and install shoring will be in accordance with the plan shown in Figure 8;
    g. After exposure on both east and wet ends, the 4-in pipeline will be cut on both ends; and
    h. The 4-in pipeline will be pulled from the east end in sections of approximately 10-ft in length. Each segment will be cut and properly marked to assure that the sequence and vertical orientation of each pipe segment is preserved for later analysis. Segmental removal on the east is required due to the fact that insufficient room is available to pull the pipeline out in one single segment on the east side of the east rail (Figure 8).

3.1.4.2 Cleaning and inspection of Crimson Casing after 4-inch Pipe Removal

1. After the removal of the 4-in pipeline from the casing, an attempt will be made to clean the inside of the casing of any residual oil or debris. Cleaning may include water washing or other appropriate methods.
2. After cleaning, the casing will be inspected internally for any damage. Methods of inspection will be determined based on the results of cleaning and accessibility to the casing, but may include internal video camera inspection or other remote means.



PLAN
1"=12'



PROFILE
HORIZ: 1"=12'
VERT: 1"=6'

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT 2 INCHES, SCALE ACCORDINGLY)
12' 0' 12' 24'

CONTRACTOR NOTICE

ALL UNDERGROUND UTILITIES OR STRUCTURES REPORTED BY THE OWNER OR OTHERS AND THOSE SHOWN ON THE RECORDS EXAMINED ARE INDICATED WITH THEIR APPROXIMATE LOCATION AND EXTENT. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES OR STRUCTURES SHOWN AND ANY OTHER UTILITIES OR STRUCTURES FOUND AT THE SITE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNERS OF THE UTILITIES OR STRUCTURES CONCERNED BEFORE STARTING WORK. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONTRACTOR AND SUBCONTRACTORS PERFORMING SUBSURFACE EXCAVATIONS SHALL COMPLY WITH ALL REQUIREMENTS OF CALIFORNIA GOVERNMENT CODE SECTIONS 4216.9 PERTAINING TO AN "EXCAVATOR." COMPLIANCE SHALL INCLUDE, BUT NOT BE LIMITED TO, TIMELY NOTIFICATION OF THE APPLICABLE REGIONAL NOTIFICATION CENTER AND CONDUCTING ON-SITE MEETINGS WITH ANY OWNER OF A HIGH PRIORITY SUBSURFACE INSTALLATION.

TG: LA 794 H-4
CRIMSON ATLAS SHEET: THUMS 8" A-10114

811 Know what's below. Call before you dig.

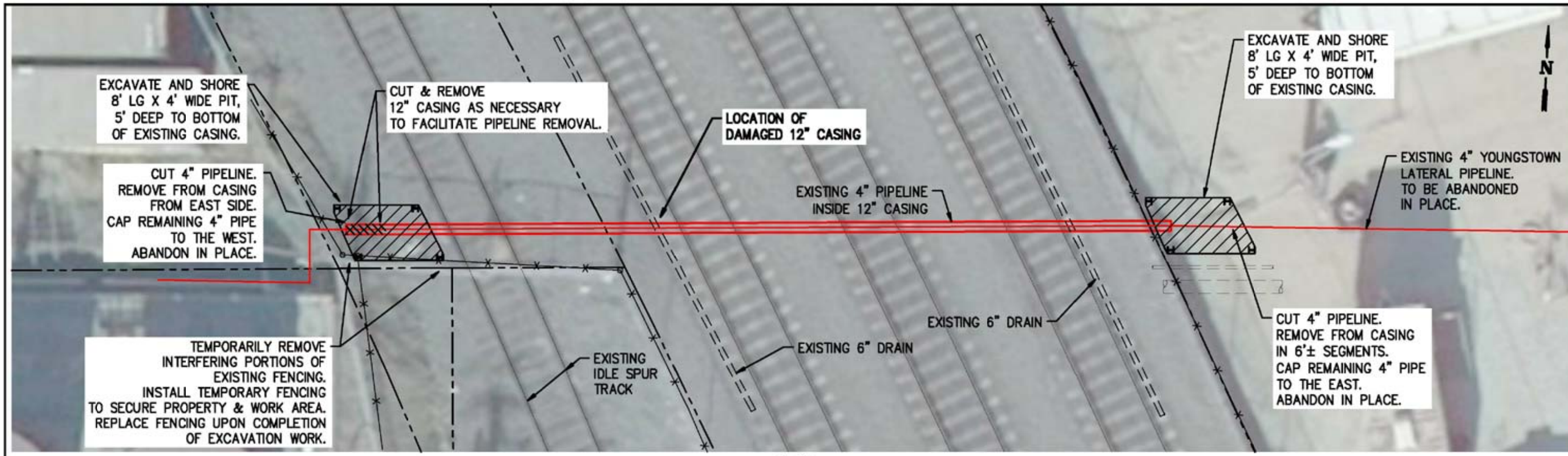
SPEC Services, Inc.
17701 Rowland Street
Fountain Valley, CA 92708
(714) 963-8077

REV NO	DATE	DESCRIPTION OF REVISION	EI NO.	BY	CHK	ELEC ENGR	MECH ENGR	APP	APP	APP
A	04/11/11	ISSUED FOR REVIEW		RWS						

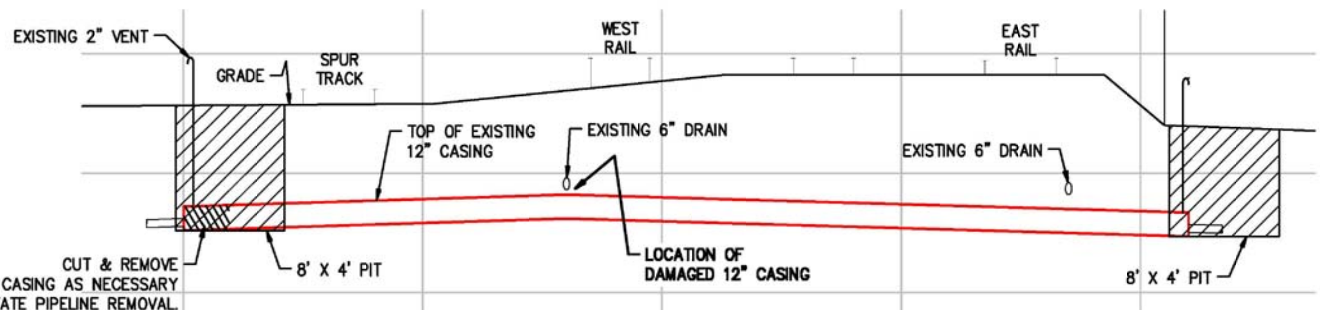
CRIMSON PIPELINE L.P.
2459 Redondo Avenue
Long Beach, California 90806

YOUNGSTOWN LATERAL
PIPE REMOVAL PLAN #1
FIGURE 7

SCALE	AS SHOWN	DATE	5014-EX-904	REV.
DRAWN	RWS	04/11/11		A



PLAN
1"=10'



PROFILE
HORIZ: 1"=10'
VERT: 1"=5'

CONTRACTOR NOTICE

ALL UNDERGROUND UTILITIES OR STRUCTURES REPORTED BY THE OWNER OR OTHERS AND THOSE SHOWN ON THE RECORDS EXAMINED ARE INDICATED WITH THEIR APPROXIMATE LOCATION AND EXTENT. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES OR STRUCTURES SHOWN AND ANY OTHER UTILITIES OR STRUCTURES FOUND AT THE SITE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNERS OF THE UTILITIES OR STRUCTURES CONCERNED BEFORE STARTING WORK. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONTRACTOR AND SUBCONTRACTORS PERFORMING SUBSURFACE EXCAVATIONS SHALL COMPLY WITH ALL REQUIREMENTS OF CALIFORNIA GOVERNMENT CODE SECTIONS 4216.9 PERTAINING TO AN "EXCAVATOR." COMPLIANCE SHALL INCLUDE, BUT NOT BE LIMITED TO, TIMELY NOTIFICATION OF THE APPLICABLE REGIONAL NOTIFICATION CENTER AND CONDUCTING ON-SITE MEETINGS WITH ANY OWNER OF A HIGH PRIORITY SUBSURFACE INSTALLATION.

LINE IS 2 INCHES AT FULL SIZE
(IF NOT 2 INCHES, SCALE ACCORDINGLY)

10' 0' 10' 20'

TG: LA 794 H-4
CRIMSON ATLAS SHEET: THUMS 8" A-10114

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17101 Bushard Street
Fountain Valley, CA 92708
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REV NO	DATE	DESCRIPTION OF REVISION	ES NO.	BY	CHK	ELEC ENGR	MECH ENGR	APP	APP	APP
A	04/11/11	ISSUED FOR REVIEW		RWS						

CRIMSON PIPELINE L.P.
2459 Redondo Avenue
Long Beach, California 90806

YOUNGSTOWN LATERAL
PIPE REMOVAL PLAN #2
FIGURE 8

SCALE	AS SHOWN	DATE	04/11/11	5014-EX-903	REV. A
DRAWN	RWS				

K:\5014\Exhibits\5014EX903.dwg, 4/11/2011 4:36:55 PM, 1:10

3.1.4.3 Removal of Damaged Section of the Crimson Casing under West Rail

1. After the cleaning and inspection of the interior of the casing, a segment of the damaged casing under the west rail french drain will be removed for further inspection and analysis
2. Removal of the damaged section of casing will require the temporary removal of a section of the french drain over the casing. This work will be coordinated with ACTA.

The DOT for Hazardous Liquid Pipelines has authority to investigate damage to pipelines under 49 CFR Part 195. That authority has been delegated to the California State Fire Marshal, Pipeline Safety Division (CSFM). Crimson has discussed procedures for investigating the damage to the pipeline with the CSFM. Crimson has requested that a representative of the CSFM be present during the pipeline removal and may request, with the concurrence of other involved parties, that the CSFM take possession of the pipeline and casing to insure the security of evidence for investigation purposes.

3.1.4.4 Slurry Abandonment of the Crimson Casing

Crimson anticipates that the casing will be formally abandoned at some point following the removal of the damaged casing. Crimson is proposing that the casing be filled with a sand and cement slurry. The abandonment activities will be approved and conducted in conjunction with ACTA and\or other parties involved in the investigation and oil removal.

3.1.5 Quantification of Recovered Oil

Crude oil and water recovered during assessment and remedial activities will be transported using proper DOT shipping documents and tracked to quantify all oil recovered to date.

Any oil/water encountered during the Youngstown Lateral pipeline and casing removal will be managed and quantified as discussed in Section 4.0.

3.2 STUDY, DESIGN, AND IMPLEMENTATION MEASURES TO REMOVAL PETROLEUM CONTAMINATION FROM ALL IMPACTED AREAS

Measures to investigate and remove contamination from impacted areas along the ACTA ROW are described in the following subsections. Due to the limitations of working within the railroad ROW, it is likely that many of the activities may be performed concurrently at different locations throughout the Site. It is Crimson's intent, where practical and safe to do so, to take advantage of access to the ROW in performing work approved under the Project Plan and associated Work Activity Plans. Prior to performing any work, access will be coordinated with ACTA and the railroad(s) and a project schedule submitted to EPA for the proposed work activities.

3.2.1 Source area and Migration Pathway onto ROW

Crimson is in the process of obtaining access or encroachment agreements with ACTA, the railroads and several private property owners. These agreements will be finalized prior to Crimson implementing the Work Activity Plans presented in the Project Plan.

Following removal of the pipeline and portions of the casing, Crimson will assess the area around the excavations for the presence of crude oil in the french drain and ROW that could be an ongoing source for contamination. Where it is practical and safe to perform, any areas with obvious presence of oil contamination will be excavated to remove impacted soils or other materials using onsite excavation equipment. Crimson will attempt to define the full vertical and lateral extent of any oil in the subsurface and to remove all impacted soils. Soil samples will be collected for laboratory analysis in accordance with the SAP to confirm cleanup of the area. Rails and other structures in the area may limit Crimson's ability to excavate without risking potential damage to such structures. Excavated materials will be placed into roll-off bins or other suitable containers, labeled, and transported to the waste management area for management in accordance with Section 4.0 of this Project Plan.

3.2.2 Sediment & Ballast on ROW - Investigation

Since the subject site encompasses a relatively large area along an active transportation corridor, the potential exists for the presence of utility laterals emplaced under the rail system of the ACTA corridor. These laterals or utility trenches may be situated in areas or backfilled with material that may allow lateral migration of crude oil from the source area. Crimson shall contact ACTA for any available records documenting the presence of utilities or subsurface structures that may act as a preferred pathway for crude oil migration proximal to the rail system. Crimson shall review the available data and evaluate the potential for any of the subsurface structures to facilitate crude oil migration. In the event any of these structures exist, Crimson will develop a site Work Activity Plan to further evaluate the area. Crimson will obtain engineering drawings from ACTA on the railroad construction and will meet with ACTA personal to evaluate potential migration pathways with particular interest focused on the french drain system paralleling the rail system.

3.2.3 Subsurface Drainage -Trench / French Drain

In order to design a Work Activity Plan, Crimson is in the process of reviewing recently obtained construction diagrams and details of the french drain system running parallel to and on each side of the existing track systems of the ACTA ROW. As discussed in Section 2.2.2, ACTA conducted a video investigation of the french drain system. A review and evaluation of this video will be completed as part Crimson’s investigation.

3.2.3.1 Areas of Identified Blockages in the French Drain System

All work will be performed under the approval of ACTA and an approved site safety plan. Several areas of the french drain have been identified by ACTA and others as potentially being blocked which may have contributed to a pooling and dispersion of separate crude oil in the french drain system. Crimson will contact ACTA personnel to identify the blocked areas for inclusion in the contamination investigation. ACTA or its contractors will be responsible for addressing any french drain blockages. Crimson will not be performing any repairs, maintenance, or modifications to the french drain system.

The evaluation of these areas and the affects of the blockages will be performed subsequent to oil removal actions and will likely require the free flow of liquid from the french drain system to the collection area. It is Crimson's understanding from the video of the French drain that oil has been present inside of the french drain pipe and may be present in the filter pack around the pipe. Where required, Crimson may request ACTA to expose and remove or repair pipe where blockage are identified.

Depending on field conditions observed during the previous excavations / investigations, a subsurface investigation will be completed in select areas of the french drain system to ascertain the potential for hydrocarbon migration through the crushed rock filter pack, ballast material, and into the underlying soil. The removed rock and gravel will be visually inspected for hydrocarbon impacts. If hydrocarbons are found, the filter fabric, and surrounding gravel pack will be removed and soil samples will be collected adjacent or beneath the french drain. Soil samples will be analyzed for crude oil as discussed in previous sections. Removed material will be replaced with imported clean material.

3.2.4 Shell Lube Plant Parking Lot

The Shell Lube Plant is located approximately 900 feet south of PCH and immediately west of ACTA ROW. The Shell Lube Plant is a petroleum lubricant bottling and storage facility. The northern portion of the property is primarily asphalt pavement. The center of the facility is warehousing and bottling and the southern portion of the facility contains rail car loading and unloading equipment and above ground petroleum storage tanks. Portions of the rail tracks and the rail car loading / unloading areas contain contact water drains for conveyance of surface runoff to an oily water tank.

Crimson contacted the management at the Shell Lube Plant regarding the impact at the Shell Lube Plant. From these discussions, Shell has informed Crimson that the asphalt surface pavement has been cleaned and is free of any oil. Areas of the facility where oil flowed will be investigated for holes, imperfections or alternate paths of oil migration. Facility personnel will be interviewed; visual inspections will be made and documented. A report and recommendations

for any future work required in this area of the project will be provided to EPA upon completion of the investigation.

3.2.5 Shell Lube Plant Storm Water Surface and Subsurface Drainage System

The Shell Lube Plant contains a storm drain catch basin located at the northeast corner of the facility. Portions of the ACTA ROW are situated at higher elevations than the Shell Lube Plant. Surface runoff of oil and water onto the Shell property resulted from a blockage in the french drain system that caused fluid to rise to the surface (Figure 4). The run-off apparently flowed to a storm drain catch basin located at the northeast corner of the Shell Lube Plant. This oil was conveyed through sub-surface piping and flowed into the Shell stormwater retention pond.

The affected catch basins and subsurface piping leading to the retention pond will be investigated to determine if additional clean-up measures need to be conducted. NRC, ACTA and Shell personnel will be involved to determine what exactly was impacted with oil and what additional measures need to occur. A report and recommendations for any future work required in this portion of the project will be provided to EPA upon completion of investigation.

3.2.6 Shell Lube Plant Storm Water Retention Pond

The Shell Lube Plant catch basins for non-contact water drain through subsurface piping to a central storm water retention pond located southeast of the facility. The pond is constructed of concrete covered earthen berms with a permeable earthen bottom. At this time, it is not known how deep the berm interior portion of the concrete capping extends down. The retention pond contains the majority of the Shell Lube Plant's non-contact storm water run-off until it becomes full. The pond is then manually drained and discharged through a valve and drain line situated at the lower elevation of the pond. This discharge is conveyed through an open concrete swale which leads east to the Dominguez Channel.

NRC recovered oil that was present in the pond from the release onto the Shell Lube Plant. NRC currently maintains absorbent boom barriers in several portions of the pond and monitors the pond for the presence of oil.

The retention pond will be investigated to determine if crude oil originating in the french drain remains on the sidewalls and has impacted the bottom of this retention basin. Crimson will continue to work with Shell personal to assess the impact of crude oil migrating from the french drain onto the Shell facility and to maintain oil removal operations during the assessment of the property. A report and recommendations for any future work required in this portion of the project will be provided to EPA upon completion of investigation.

3.2.7 Shell Storm Water Pond Discharge Conveyance to Dominguez Channel

Shells storm water retention pond discharges to a concrete swale and culvert piping that leads east to the Dominguez Channel. This swale gravity drains water to an outfall that discharges to

the channel. Currently it is unknown if any oil traveled through this segment of the site. The discharge piping, concrete swale, culvert and associated piping will be investigated to determine if additional assessment or clean-up measures need to occur in these areas. NRC, ACTA and Shell personnel will be interviewed to determine if any of these areas were impacted with oil. A report summarizing the findings and recommendations for any future work required in this portion of the project will be provided to EPA upon completion of investigation.

3.2.8 ACTA Outfall

The ACTA outfall is located in the northwest corner of the collection area. This 18-in CSP connects laterally upstream to the two french drains that parallel the east and west perimeters of ACTA ROW. A subsurface crossover pipe connects the two french drains systems before attaching to the CSP outfall and draining to a concrete swale (Figure 5). The concrete swale flows south for approximately 225 feet before transitioning to curb and gutter.

Currently, the outfall discharge is captured by a plastic sheeting lined containment and oil recovery system that was constructed at this location in response to the oil release. Crimson will investigate this outfall and adjacent area to determine whether further clean-up and/or remedial actions are necessary.

Crimson and ACTA are presently in discussion regarding the operation and maintenance of the collection and treatment system at the Site. Field activity logs associated with the collection and containment system will be submitted to EPA as required by the Order (EPA, March 2011).

3.2.9 Los Angeles City Storm Water System

The swale transitions to the curb and gutter system (north of E. Opp Street). The system contains several catch basins on the east and west sides of Leeds Ave. and conveys storm water through subsurface piping leading south, to a Los Angeles City sump (wet well) and lift station. The lift station automatically discharges storm water to the Dominguez Channel.

On February 9th, 2011 a work plan was submitted to EPA on behalf of ACTA which described the cleaning of storm drain lines, sump and lift station with a sewer line jetter and or high pressure steam cleaning. This cleaning was apparently performed until wash water was no longer producing oil sheen.

Information received from ACTA and EPA indicates that the Los Angeles city storm water system from the catch basin to the lift station has been cleaned of all oil and that no additional actions are required at this time. Crimson will continue to work with EPA in obtaining documentation to confirm this area is signed off and no further actions are required.

3.3 CONTAMINATION INVESTIGATION PLAN

Work activities previously discussed in section 3.2 may require additional investigation, assessment, and removal of free oil to fulfill the requirements of the Order. Detailed Work Activity Plans will be provided as separate documents to further describe any contamination investigations. The Work Activity Plans for any areas requiring additional assessment will be submitted to EPA for approval prior to commencement of any work.

4.0 WASTE MANAGEMENT

4.1 CONTAMINATED WASTE SAMPLING & DISPOSAL PLAN

Crimson will use the modified DFG Waste Segregation and Quantification Plan (Appendix E) as guidance for waste management.

4.1.1 Management, Inventory and Labeling

Waste containers will be temporarily stored at Leeds Avenue and Grant Street Collection Area (storage area) for the control and security. The fenced area immediately east of Leeds Street will be the primary storage location. Wastes may be temporarily stored near work areas through the Site as work activities are in progress. The wastes will then move moved to the waste storage area as soon as practical for inventory, characterization, and control. All waste material brought into the storage area will be checked for integrity and any discrepancies will be noted on the field log. Any discrepancies will be rectified immediately.

A waste management inventory log will be maintained and will list each container, the container number, the container contents, contact information and accumulation date. Any waste container temporarily stored at a work site must be included on the inventory and its location identified until such time as the container is moved to the waste storage area.

Each container will be labeled with the contents of the container, beginning date of accumulation of waste into the container, and the appropriate contact and shipping information. Labels will be applied to the outside of containers to identify the primary and subsidiary hazards specific to the contents. While the Hazardous Material Regulations include detailed and specific labeling standards for each type of hazardous material and for many kinds of containers and packages, the following requirements are generally applicable to all labels:

- When two or more labels are required, they will be placed / be displayed next to each other;
- Labels must be on a background of contrasting color or have a dotted or solid line outer border;
- Labels will not be obscured by markings or attachments;
- Labels will be durable, weather resistant, and able to withstand the elements for 30 days deterioration or change from exposure to conditions incident to transportation; and
- Labels will be at least 100 mm (3.9 inches) on each side.

The Waste Management Supervisor will be responsible for all wastes generated at the site. All inventories, log sheets, or other relevant materials are to be forwarded to the Supervisor at the end of each work day.

4.2 DISPOSAL FACILITIES

All waste material generated during the clean-up and assessment operations will be placed into DOT approved containers. Upon approval and review of calculations from the DFG OSPR and EPA, Crimson will identify appropriate California Department of Toxics Substance Control (DTSC) approved and permitted Transportation, Storage, and Disposal Facilities (TSDF) or approved recycling facilities. California Health & Safety Code Section 25143.12 is applicable to all oily debris generated on this project. If testing criteria in 40 CFR Section 261 meets specified limitations, solid waste will be sent to a Class 1 Subtitle D Landfill for disposal.

Crude oil impacted soils, sediments & gravel generated from this project will be characterized in accordance with 40 CFR Section 261 and CCR Title 22 Chapter 4.5. Laboratory analytical results for soils and sediments addressed in this Project Plan will be used to characterize and classify this waste stream. Disposal options considered will be agreed upon with the DFG and EPA prior to any off site transport of wastes.

Crude oil generated from this project is a recyclable material and will be placed into Crimson inventories for delivery to end user refineries. Water generated from the decanting of oily water and decontamination operations may be recycled or transported for off-site treatment using proper shipping documents to an approved facility with approval of EPA and DFG.

4.3 TRANSPORT AND DISPOSAL SUMMARY REPORT

Upon completion of field activities a summary report detailing the off-site transportation and disposal destinations of all waste material will be generated and submitted to the Department of Fish and Game, OSPR, for review and disposal approval. The report will become incorporated into the permanent record of field operations and will be available for review to authorized parties.

4.3.1 Summary Volumes

All waste material transported for off-site disposal will be volumetrically inventoried based on the nature of the waste material. Solid waste will be inventoried in US pounds and liquid waste will be inventoried in US gallons. All waste material transported for off-site disposal or recycling will be categorized and classified as outlined in Section 4.1 and 4.2.

4.3.2 Destination of Waste

A summary of the disposal destinations will be provided in the final report. All disposal or recycling facilities will be approved by the DFG and EPA. Disposal documentation, to include signed weight tickets along with transportation documentation will be included with the final report.

5.0 SAFETY

Crimson will prepare site specific health and safety plans for each work location where oil removal and investigation activities occur. Appendix D contains a template of the Site-Specific Health and Safety Plan that will be used. The plan(s) will be prepared and updated daily for the proposed work activities. The Site Health and Safety Officer (SHSO) will have overall responsibility for safety management at the site. All employees will be responsible for safety performance at their particular work station. All subcontractors and visitors to the work site will be required to comply with the site safety plan

A Site-Specific Health and Safety Plan will be prepared for the work areas listed below and will be applicable for continuous use unless modified by the SHSO.

- Collection Area
- Waste Management Area

If working conditions change in these areas, the Site-Specific Health and Safety Plan will be modified to reflect the new conditions.